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Jaeger et al.

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(54) **PNEUMATIC AUTOINJECTOR WITH
AUTOMATED MIXING**

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See application file for complete search history.

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ABSTRACT

A pneumatic autoinjector that, once activated, automatically mixes at least two components in a pre-filled chamber and then ejects the mixture in a manner suitable for medicament injection. The mixable components may be a dry/wet combination (e.g., powder and solvent), wet/wet combination (e.g., two pre-diluted medicaments), wet/gas combination (e.g., chemical A and gas B), or gas/gas combination. In some embodiments, autoinjectors made in accordance with the teachings of the present disclosure may automatically perform a sequence comprising thorough medicament mixing (e.g., reconstitution of a dried medicament with solvent), an optional pause to enhance medicament dissolution or suspension, optional needle insertion into the patient (not required in needle-free embodiments), medicament injection into the patient, and optional needle retraction for safe storage.

18 Claims, 14 Drawing Sheets

